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## Anticorrelation of 5-$\mu$m Brightness and Low Albedo Features in Jovian NEB.

*P. A. Yanamandra-Fisher, G. S. Orton (Jet Propulsion Laboratory)*

Observations of Jupiter in the 5-\mum window probe atmospheric levels at pressures of 6 bars or less. Images at this wavelength reveal the presence of ''hot spots'' where radiances from warm atmosphere emerge from holes in the clouds at these atmospheric levels. Visual and near-infrared reflected sunlight that also probes these levels shows a tantalizingly similar pattern, where reflectivity in the red is anticorrleated with 5-\mum thermal radiance. With the descent of the Galileo probe into a 5-\mum hot spot, characterization of the hot spots and their relation to the low-albedo features is of some interest. We are in the beginning of a study of the extensive data set of Jupiter images acquired at the NASA Infrared Telescope Facility to support the Galileo atmospheric investigation and included observations at 1.58 \mum, sensitive to cloud-top reflectivity, and 4.78 \mum, sensitive to cloud emissivity. For this study, we present the results of high spatial resolution images adquired in July, 1999, near the time of Galileo's 21st orbit encounter. Our initial results show that 5-\mum hot spots exhibit a corresponding low-albedo feature in the cloud deck. However, there are exceptions to the converse: not all low-albedo features correspond to high 5-\mum radiances. These findings are consistent with a model in which a clearing in the upper-level clouds of ammonia and ammonium hydrosulfate reveals a darker underlying cloud at 1.58 \mum and generally bright radiances, but where other opacity sources such as $H_2O$ vapor can also extinguish 5-\mum flux. We note that the high 5-\mum radiances also correlate well with high 8.57-\mum radiances. Because the latter are modulated primarily by changes in the upper $NH_3$ ice cloud opacity, this correlation implies that the $NH_3$ ice cloud field is responsible for the varibility seen in the 5-\mum maps or that the $NH_3$ ice cloud field is highly correlated with the $NH_4SH$ cloud field. We note that the anticorrelation between 1.58-\mu albedo and 4.78-\mu thermal radiance extends to other discrete features such as the white ovals and the recently observed dark spots near 30\circS. Our remaining objective is to establish some general description that describes this anticorrelation over the global cloud field and determine where exceptions occur, as they may be clues to the variable distribution of water vapor across the planet.

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